

## Claims

1. A composite article for use in an aircraft brake heat pack, the article comprising a core layer having a face portion and a wear layer attached to the face portion,  
5 wherein the wear layer has a density lower than the core layer.
2. A composite article as claimed in Claim 1, wherein the density of the core layer is in excess of  $1.85 \text{ gcm}^{-3}$ .
- 10 3. A composite article as claimed in Claim 1, wherein the wear layer is formed from a C-C composite.
4. A composite article as claimed in Claim 1, wherein the core layer is a C-C composite article impregnated with a refractory carbide.
- 15 5. A composite article as claimed in Claim 4, wherein the refractory carbide is silicon carbide or boron carbide.
6. A composite article for use in an aircraft brake heat pack, the article comprising a core layer formed from C-C composite impregnated with a refractory carbide, the  
20 core layer having a face portion to which is attached a C-C wear layer.
7. A composite article as claimed in Claim 6, wherein the refractory carbide is silicon carbide or boron carbide.

8. A composite article as claimed Claim 6, wherein the density of the core layer is in excess of  $1.85 \text{ gcm}^{-3}$ .
9. A composite article as claimed in Claim 8, wherein the density of the core layer is in the range of greater than  $1.85 \text{ gcm}^{-3}$  to  $2.95 \text{ gcm}^{-3}$ .
10. A method of forming a composite article for use in an aircraft brake heat pack, the method comprising forming a core layer from a relatively higher-density material, the core layer having a face portion, and forming a wear layer from a relatively lower-density material and attaching the wear layer to the face portion of the core layer.
11. A method of forming a composite article for use in an aircraft brake heat pack, the method comprising forming a C-C core layer with a face portion, densifying the core layer by liquid impregnation; forming a C-C wear layer and attaching the wear layer to the face portion of the densified core layer.
12. A method as claimed in Claim 11, comprising densifying the core layer by liquid impregnation with silicon and/or boron,
13. A method as claimed in Claim 12, further comprising converting the silicon and/or boron to the respective refractory carbide by reaction with the C-C matrix.
14. A method as claimed in Claim 11, further comprising forming the wear layer from carbon fibres which extend radially from an inner periphery of the wear layer toward or to an outer periphery thereof.

15. An aircraft wheel and brake assembly comprising brake discs, one or more of the brake discs having a core layer of density greater than  $1.85 \text{ gcm}^{-3}$  and at least one wear layer attached to the core of density  $1.85 \text{ gcm}^{-3}$  or lower.